

## *Biofuels for the Economy*

Biofuels—primarily ethanol and biodiesel—are known for their clean-burning properties and for their role in strengthening our energy security by displacing foreign oil. Less obvious, perhaps, is their ever-growing function in helping maintain a healthy economy. The ethanol and biodiesel industries currently generate more than 60,000 U.S. jobs and add more than \$2 billion to the U.S. economy each year. As the demand for these fuels increases, the U.S. trade deficit will decrease, allowing more jobs to remain in our country. And because environmental health and energy security are closely bound with the economy, the economic benefits of biofuels spread beyond U.S. jobs: reduced cleanup of oil spills, lower health costs due to fewer toxic emissions, and a diminished military presence in oil-rich regions.



### What Are Biofuels?

Biofuels are fuels made from biomass such as forest residues, agricultural crops and residues, and portions of municipal solid and industrial wastes.

More directly, the industries that support the production, distribution, and use of biofuels are realizing economic benefits. Ethanol, the most commonly used biofuel, contributes significantly to the U.S. economy. According to the Renewable Fuels Association *Industry Outlook 1999 and Beyond*, and the Clean Fuel Development Coalition's *1999 Fuel Ethanol Fact Book*:

- Ethanol capacity is now at 1.8 billion gallons per year.
- Capital investment of more than \$4 billion has been made in 47 fuel ethanol plants in 18 States.
- The ethanol industry generates nearly 60,000 jobs.

Biodiesel has become a popular diesel substitute and fuel extender in compression ignition engines. But because it currently is not produced on a large scale, its biggest drawback is cost. Biodiesel production will stimulate economic growth in the agricultural sector and may become a niche market for excess agricultural production capacity. Most importantly, biodiesel will help our commercial sector protect itself against a growing dependence on imported petroleum and the risk of higher petroleum prices in the future.

## Oil—Asset or Liability?

Oil may be the most important single element in the U.S. economy. It keeps the wheels turning on vehicles and in factories, and is the primary feedstock for many chemicals, plastics, medicines, and other products.

Unfortunately, oil may also be our greatest economic liability. Fifty years ago the United States produced half the world's oil. Now we produce less than half the amount needed for our own use. That means we must rely on imports to keep our wheels turning, at a considerable cost. The U.S. Department of Energy estimates that 1.5–2 million U.S. jobs have been lost, directly and indirectly, because of petroleum imports, which account for almost half of America's trade deficit (\$43.7 billion in 1990). And protecting our overseas oil interests with military operations costs billions of dollars each year.

A facility built or retrofitted to convert biomass to fuels generally requires several hundred temporary and permanent jobs to be filled—for construction, operation, and maintenance—which will have a ripple effect on the rural economy. Technologies can increase the yields of crops currently used to produce fuels, and can provide ways to convert agricultural waste to fuels, saving the cost of disposal.

According to the U.S. Department of Agriculture, if ethanol production reached 5 billion gallons annually, farm income would increase by \$1 billion and as many as 108,000 jobs would be created.

The Federal Government and many State governments recognize the value of ethanol to our economy by offering tax incentives or subsidies. A Federal incentive that reduces the cost of ethanol in 10 percent blends with gasoline by about 5 cents per gallon was extended through the year 2007. Additionally, 16 States have their own incentives, ranging from direct subsidies to tax incentives.

The economic benefits of biofuels extend far beyond the capital investment and new jobs associated with their production. They can help strengthen our economy from within and protect it from the vagaries of international politics and sentiment.

*For more information, contact:*

**[www.ott.doe.gov/biofuels](http://www.ott.doe.gov/biofuels)**

